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3' to the inverted repeats which is likewise produced with minimal vector sequence. *In vivo* transfections show expression of reverse transcriptase(s)/RNase H(s) within eukaryotic cells as well as synthesis of RNA transcripts with formation of the ss-cDNA for such therapeutic purposes as gene inactivation using duplex or triplex binding of nucleic acids, site-directed mutagenesis, interruption of cellular function by binding to specific cellular proteins, and interfering with RNA splicing functions.

IN THE CLAIMS

Cancel claim 2 without prejudice.

Rewrite the following claims (in accordance with the requirements of 37 C.F.R. 1.12(c)(iii), another version of the rewritten claim(s), on one or more pages separate from this amendment and marked up to show all the changes relative to the previous version of that claim(s), is attached) to read as follows:

A3

1. (Amended) A nucleic acid sequence defining a set of genetic elements comprising:

- a sequence coding for a sequence of interest,
- a reverse transcriptase gene;
- a sequence coding for a primer binding site for the reverse transcriptase gene located 3' to said sequence of interest,
- a sequence coding for a sequence having enzymatic activity within said sequence of interest, and
- a sequence coding for an inverted tandem repeat, said sequence of interest being located either (a) between the inverted tandem repeat or (b) between the inverted tandem repeat and the 3' primer binding site,

said set of genetic elements being incorporated into a vector for delivery to a cell.

A4

5. (Amended) The set of genetic elements of claim 1 wherein the nucleic acids comprising said inverted tandem repeat form a stem-loop intermediate with said sequence of interest in the loop and said inverted tandem repeat forming the stem after expression in the cell.

A5

13. (Amended) An mRNA transcript of a reverse transcriptase gene and further comprising a sequence of interest including a sequence with enzymatic activity therein, said sequence of interest including said sequence having enzymatic